



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: 10001790 A

(43) Date of publication of application: 06.01.98

(51) Int. Cl

**C23C 30/00****C23C 28/02**

(21) Application number: 08147067

(22) Date of filing: 10.06.96

(71) Applicant: KAWASAKI STEEL CORP

(72) Inventor: TOBIYAMA YOICHI  
MOCHIZUKI KAZUO**(54) GALVANIZED STEEL SHEET EXCELLENT IN CORROSION RESISTANCE****(57) Abstract:**

**PROBLEM TO BE SOLVED:** To impart good mechanical properties, spot weldability and excellent corrosion resistance to a galvanized steel sheet by applying an Fe-P- $\alpha$  layer contg. specified metallic elements to the boundary between a galvanizing layer and a steel sheet.

**SOLUTION:** A cold roller steel sheet is subjected to alkali degreasing, is pickled, is washed, is thereafter applied with an Fe-P- $\alpha$  plating layer contg. at least one kind of element selected from Ni, Cu, Co, Cr, and Mn

and is next applied with galvanizing. The content of P in the Fe-P- $\alpha$  layer formed on the boundary is preferably regulated to 0.01 to 10wt%. Furthermore, the coating weight of the Fe-P- $\alpha$  layer is preferably regulated to 0.1 to 10g/m<sup>2</sup> per side of the steel sheet. By the synergistic effect between the Fe-P- $\alpha$  layer and the galvanizing layer, its corrosion resistance improves, and the coating weight of zinc can be reduced. Moreover, deterioration in the mechanical properties of the steel sheet caused by the excessive addition of P to the steel sheet stock can be prevented.

COPYRIGHT: (C)1998,JPO